

CLAIMS

What is claimed is:

5 Claim 1. In an electrolyte solution containing at least selected one of sulfuric acid and copper sulfate used to manufacture an electrolytic copper foil by electrolysis, the electrolyte solution for manufacturing the electrolytic copper foil, based on the 1-liter electrolyte solution, comprising:

0.5 to 40 mg of at least one sulfur compound selected from a disulfur compound, dialkylamino- T-oxomethyl- thioalkan sulfonic acid, and thioalkan
10 sulfonic acid salt;

1 to 1000mg of at least more than one kind of an organic compound selected from a group consisting of a poly akylene glycol-type surfactant and low molecular gelatin; and

0.1 to 80 mg of chlorine ion added.
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Claim 2. The electrolyte solution of claim 1, wherein the dialkylamino- T-oxomethyl- thioalkan sulfonic acid or the salt thereof is dithiocarbamic acid compound or salt thereof.

20 Claim 3. The electrolyte solution of claim 1, wherein additives of the electrolyte solution further include 0.1 to 8 mg/L of thiourea derivative, a nitrogen compound.

Claim 4. The electrolyte solution of claim 1, wherein the disulfur
25 compound is SPS (Bis-(3-sulfopropyl)-disulfide, disodium salt)).

Claim 5. The electrolyte solution of claim 1, wherein the organic compound is a poly akylene glycol-type surfactant.

30 Claim 6. A method of manufacturing an electrolytic copper foil, said method comprising steps of:

A) preparing an electrolyte solution added with 0.5 to 40 mg of at least

one sulfur compound selected from a disulfur compound, dialkylamino- T-oxomethyl- thioalkan sulfonic acid, and thioalkan sulfonic acid salt, 1 to 1000 mg of at least more than one kind of an organic compound selected from a group consisting of a poly akylene glycol-type surfactant and low molecular gelatin,
5 and 0.1 to 80 mg of chlorine ion, based on the 1-liter electrolyte solution;

B) generating the electrolytic copper foil on a cathode by flowing electricity after impregnating an anode and the cathode with the electrolyte solution.

10 Claim 7. The method of claim 6, wherein the dialkylamino- T-oxomethyl-thioalkan sulfonic acid is dithiocarbamic acid compound, and the thioalkan sulfonic acid salt is dithiocarbamic salt.

Claim 8. The method of claim 6, wherein 0.1 to 8 mg/L of thiourea
15 derivative, a nitrogen compound is further included in the electrolyte solution.

Claim 9. The method of claim 6, wherein the disulfur compound is SPS (Bis-(3-sulfopropyl)-disulfide, disodium salt).